

**PHILIP MORRIS U.S.A.**  
**INTER OFFICE CORRESPONDENCE**  
**Richmond, Virginia**

**To:** Distribution

**Date:** October 8, 1997

**From:** J. M. Garman

**Subject:** Efficiency of Cambridge Filter Pads to Trap Nicotine-in-Smoke

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As requested, a special study was performed to determine if nicotine in mainstream cigarette smoke passes through the Cambridge filter pad. In order to assess this, three brands were smoked on the Filtrona 435 Smoking Machine following FTC protocol. A second Cambridge filter pad assembly, Gelman tip-back disposable filter pad holder, was inserted behind each cigarette port assembly on the smoking machine. The distance between the two filter holders was approximately 12 cm, (length of the Filtrona cigarette port assembly plus a Tygon tubing connector). Three ports each of Industry Monitor #16, Camel KS SP, Winston KS SP, and Marlboro KS SP were smoked. Routine extraction and GC analysis for nicotine were performed on the primary TPM pad and on the inserted secondary pad.

Attached are the nicotine results which ranged from 0.90 mg/cigt (IM#16) to 1.19 mg/cigt (Camel) on the primary pad. The samples listed with a “- B” represent the back pad nicotine analysis. For all cigarettes smoked, no nicotine was detected in the back pad per PTL’s nicotine GC procedure. Attached are the GC chromatograms for the 0.06 mg/cigt nicotine standard which is the lowest standard of our working standard set, a 0.015 mg/cigt nicotine standard which was prepared for this study as a 1 to 5 dilution of our lowest standard, and all of the chromatograms for the back filter pads.

The integration parameters of the GC did not detect a nicotine peak for the 0.015 mg/cigt standard but a small peak is visible on the chromatogram. The chromatograms for the industry monitor and all the back filter pads show no visible peak for nicotine.



Attachments

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C. Callicutt	C. Ellis
L. Chambers	K. Hughes
C. Connell	K. Podraza
R. Cox	B. Strang
W. Dwyer	J. Whidby
Central Files	

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